

What is Claimed Is:

1. A method in a processor-based system configured for executing a plurality of management programs according to respective command formats, the method comprising:

receiving from a user an input word representing at least a portion of a generic command;

determining whether the input word is a new command word relative to a character-based command parse tree configured for identifying known command words;

selectively adding the input word to the character-based command parse tree based on determining that the input word is a new command word;

validating the generic command following the selectively adding step; and

issuing a prescribed command of a selected one of the management programs according to the corresponding command format, based on validating the generic command.

2. The method of claim 1, wherein the determining step includes:

comparing a first character of the input word with a group of first character elements at a root level of the character-based command parse tree, the first character elements including respective initial characters of the known command words;

successively traversing to a linked character element in an adjacent level of the character-based command parse tree based on a corresponding match between a corresponding character of the input word and a corresponding matched character element of the character-based command parse tree; and

identifying the input word as a new command word based on a determined absence of a match for one character of the input word relative to the linked character elements.

3. The method of claim 2, wherein the successively traversing step includes identifying the linked character element in the adjacent level based on a linked index value.

4. The method of claim 2, wherein the validating step includes:

comparing each input command word, including the input word, to a command word translation table, configured for storing for each prescribed command word a corresponding token, for identification of a matching token; and

5 determining a presence of the matching token within the command parse tree for each input command word.

5. The method of claim 4, wherein the determining step includes recursively traversing the command parse tree based on an order of the input command words for identification of the matching token within the identified one element.

6. The method of claim 5, wherein the issuing step includes issuing the prescribed command based on a corresponding command key specified for the matching token within the identified one element.

7. The method of claim 6, wherein the issuing step further includes accessing a prescribed translator configured for converting the generic command according to the corresponding command format into the prescribed command based on the corresponding command key.

8. The method of claim 1, wherein the validating step includes:

traversing a command parse tree that specifies valid generic commands relative to a prescribed generic command format, the command parse tree having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value; and

5 identifying one of the elements of the command parse tree as a best match relative to the generic command.

9. The method of claim 8, wherein the issuing step includes issuing the prescribed command based on the identified one element corresponding to the portion of the generic command.

10. The method of claim 9, further comprising executing the prescribed command within the corresponding selected one management program.

11. A system configured for executing a plurality of management programs according to respective command formats, the system comprising:

a parser configured for accessing a character-based command parse tree, for identifying whether an input word of a generic command received from a user is a new command word, and
5 a command parse tree for validating the generic command;

a tree management process configured for selectively adding the input word to the character-based command parse tree and the command parse tree based on a determination that the input word is a new command word; and

a plurality of translators configured for issuing commands for the management programs
10 according to respective command formats, the parser outputting a prescribed command to a selected one of the translators based on the validating of the generic command.

12. The system of claim 11, wherein the character-based command parse tree is configured for identifying known command words, the character-based command parse tree having a root level including a group of first character elements including respective initial characters of the known command words, and at least one adjacent level having at least one linked character element
5 referenced by one of the first character elements, the at least one linked character element configured for identifying a corresponding successive character of one of the known command words.

13. The system of claim 12, wherein the parser is configured for identifying whether the input word is a new command word based on a determined absence of a match for one character of the input word relative to the at least one linked character element.

14. The system of claim 12, wherein the parser is configured for identifying the input word as one of the known command words based on a sequence of characters of the input word matching character elements within the character-based parse tree, ending with an end node, for one of the known command words.

15. The system of claim 11, wherein the command parse tree is configured for specifying valid generic commands relative to a prescribed generic command format and having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value, the parser identifying one of the elements as a best match relative to the generic command, the parser outputting the prescribed command based on the identified one element.

16. The system of claim 15, wherein the parser comprises a command word translation table configured for storing for each prescribed command word a corresponding token for identification of a matching token, the parser configured for determining a presence of the matching token within the command parse tree for each input command word.

17. The system of claim 16, wherein the parser recursively traverses the command parse tree based on an order of the input command words for identification of the matching token within the identified one element.

18. The system of claim 17, wherein the parser validates at least a portion of the generic command by identifying the one element having the best match relative to the portion of the generic command.

19. A computer readable medium having stored thereon sequences of instructions for executing a plurality of management programs according to respective command formats, the sequences of instructions including instructions for performing the steps of:

- receiving from a user an input word representing at least a portion of a generic command;
- determining whether the input word is a new command word relative to a character-based command parse tree configured for identifying known command words;
- selectively adding the input word to the character-based command parse tree based on determining that the input word is a new command word;
- validating the generic command following the selectively adding step; and

10 issuing a prescribed command of a selected one of the management programs according to the corresponding command format, based on validating the generic command.

20. The medium of claim 19, wherein the determining step includes:

 comparing a first character of the input word with a group of first character elements at a root level of the character-based command parse tree, the first character elements including respective initial characters of the known command words;

5 successively traversing to a linked character element in an adjacent level of the character-based command parse tree based on a corresponding match between a corresponding character of the input word and a corresponding matched character element of the character-based command parse tree; and

10 identifying the input word as a new command word based on a determined absence of a match for one character of the input word relative to the linked character elements.

21. The medium of claim 20, wherein the successively traversing step includes identifying the linked character element in the adjacent level based on a linked index value.

22. The medium of claim 20, wherein the validating step includes:

 comparing each input command word, including the input word, to a command word translation table, configured for storing for each prescribed command word a corresponding token, for identification of a matching token; and

5 determining a presence of the matching token within the command parse tree for each input command word.

23. The medium of claim 22, wherein the determining step includes recursively traversing the command parse tree based on an order of the input command words for identification of the matching token within the identified one element.

24. The medium of claim 23, wherein the issuing step includes issuing the prescribed command based on a corresponding command key specified for the matching token within the identified one element.

25. The medium of claim 24, wherein the issuing step further includes accessing a prescribed translator configured for converting the generic command according to the corresponding command format into the prescribed command based on the corresponding command key.

26. The medium of claim 19, wherein the validating step includes:

traversing a command parse tree that specifies valid generic commands relative to a prescribed generic command format, the command parse tree having elements each specifying at least one corresponding generic command component and a corresponding at least one command
5 action value; and

identifying one of the elements of the command parse tree as a best match relative to the generic command.

27. The medium of claim 26, wherein the issuing step includes issuing the prescribed command based on the identified one element corresponding to the portion of the generic command.

28. The medium of claim 27, further comprising instructions for performing the step of executing the prescribed command within the corresponding selected one management program.

29. A system configured for executing a plurality of management programs according to respective command formats, the system comprising:

means for receiving from a user an input word representing at least a portion of a generic command;

5 means for determining whether the input word is a new command word relative to a character-based command parse tree configured for identifying known command words;

means for selectively adding the input word to the character-based command parse tree based on determining that the input word is a new command word;

means for validating the generic command following the selectively adding step; and
10 means for issuing a prescribed command of a selected one of the management programs according to the corresponding command format, based on validating the generic command.

30. The system of claim 29, wherein the determining means includes:

means for comparing a first character of the input word with a group of first character elements at a root level of the character-based command parse tree, the first character elements including respective initial characters of the known command words;

5 means for successively traversing to a linked character element in an adjacent level of the character-based command parse tree based on a corresponding match between a corresponding character of the input word and a corresponding matched character element of the character-based command parse tree; and

10 means for identifying the input word as a new command word based on a determined absence of a match for one character of the input word relative to the linked character elements.

31. The system of claim 30, wherein the successively traversing means is configured for identifying the linked character element in the adjacent level based on a linked index value.

32. The system of claim 30, wherein the validating means includes:

means for comparing each input command word, including the input word, to a command word translation table, configured for storing for each prescribed command word a corresponding token, for identification of a matching token; and

5 means for determining a presence of the matching token within the command parse tree for each input command word.

33. The system of claim 32, wherein the determining means is configured for recursively traversing the command parse tree based on an order of the input command words for identification of the matching token within the identified one element.

34. The system of claim 33, wherein the issuing means is configured for issuing the prescribed command based on a corresponding command key specified for the matching token within the identified one element.

35. The system of claim 34, wherein the issuing means is configured for accessing a prescribed translator configured for converting the generic command according to the corresponding command format into the prescribed command based on the corresponding command key.

36. The system of claim 29, wherein the validating means includes:

means for traversing a command parse tree that specifies valid generic commands relative to a prescribed generic command format, the command parse tree having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value; and

means for identifying one of the elements of the command parse tree as a best match relative to the generic command.

37. The system of claim 36, wherein the issuing means is configured for issuing the prescribed command based on the identified one element corresponding to the portion of the generic command.

38. The system of claim 37, further comprising means for executing the prescribed command within the corresponding selected one management program.